Message

From: Whittier, Robert [Robert.Whittier@doh.hawaii.gov]
Sent: 11/18/2016 12:29:33 AM
To: Frazier, William Mark [william.frazier@doh.hawaii.gov]; Pallarino, Bob [Pallarino.Bob@epa.gov]; Linder, Steven [Linder.Steven@epa.gov]; steven.chang@doh.hawaii.gov
CC: Takaba, Richard R [richard.takaba@doh.hawaii.gov]; roxanne.kwan@doh.hawaii.gov
Subject: Re: Navy SOW revised, November 5, 2016 (MF SOW review 11-17-16)
Attachments: Summary of Comments on Sections 6 & 7 Revised SOW_rbw.doc

Hi All,

Here are my review comments. These comments go beyond just a specific review of the SOW/WP and into the area of investigation strategy. For the specific purpose of the revised SOW/WP approval select what you feel is applicable.

Thanks,
Bob W.

From: Frazier, William Mark
Sent: Thursday, November 17, 2016 1:50:54 PM
To: Pallarino, Bob (Pallarino.Bob@epa.gov); Linder, Steven (Linder.Steven@epa.gov); Chang, Steven Y
Cc: Takaba, Richard R; Kwan, Roxanne S; Whittier, Robert
Subject: Navy SOW revised, November 5, 2016 (MF SOW review 11-17-16)

My eight comments are given below with underlines on the main points:

Pg 3, Figure 1: Please show the Red Hill shaft, not just the well. Same with the BWS Halawa shaft.

Pg 6, section 2.3: Boundaries of the site are listed to be only two, the Study area and the Model Domain.

- Please consistently use these two definitions thru out the SOW (i.e. not facility, not just beneath the tanks, surrounding areas, or as on pg 26 line 30 "flow within aquifers around Red Hill").
- The study area boundary to the southwest is defined as "residential housing". Per the Fig 1 footprint, this means the Alimanu crater and housing located west and south of it Alimanu crater? Please confirm.
- Per Fig 1, if Alimanu crater is included then the cap rock and Salt Lake volcanics are to be further discussed as a southern hydraulic barrier in the CSM, etc?

Pg 8, section 2.4, Table 1: Derivative Deliverable

- The CSMs purpose is listed as NAPL and dissolved phase contaminants. Please insert geology and hydrogeology as well.

Pg 16, section 3.1.1, line 12: Please add lava tubes as a feature that may affect fluid movement.

Pg 24, line 12: States collect GW chem for one round only. Since GW chem needs to be examined over time, would not additional sample collection is needed.

Pg 29, section 3.6 and pg31 line 44: Here the SOW mentions Tracer Study in the title, yet offers no mention of how a tracer study would be applied, tracer test goals, risk or benefits. Please expand the Tracer Study section.

Pg 36, table 13, No 1, third block down, right column: Here it discusses basalt flows, logs and perched aquifers. We suggest mapping and defining the lateral extent of clinker zones, since clinker zones are the zones of highest flow potential.

Pg 40, line 35 to pg 41 line 7: Presents physical data quality for key questions is listed. We suggest clinkers be evaluated first, then the basalt effective porosity for the CF&T modeling, since flow is dominated by the clinker zones.

Regards

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